

REMARKS

In the Office Action dated September 17, 2003, the Examiner has *finally rejected* claims 1-27, 29, and 31-55 pending in the application on the basis of new ground(s) of rejection and newly cited art. Applicant respectfully requests reconsideration and withdrawal of the finality of the rejection of the Office Action dated September 17, 2003.

A good and sufficient reason why the present response is necessary and was not earlier presented is that an entirely new references have been cited in the present final rejection dated September 17, 2003 (37 CFR §1.116(c)). The new references are Fujisawa et al. (USPN 6,232,650) (hereinafter "Fujisawa") and Hassan S. Hashemi (USPN 6,191,477 B1) (hereinafter "Hashemi '477"), which are for the first time brought to Applicant's attention by means of the present *final rejection* dated September 17, 2003. The new references, i.e. Fujisawa and Hashemi '477, were not cited in the present application prior to the instant final rejection. Since Fujisawa and Hashemi '477 are references upon which the Examiner has now relied, Applicant believes that it would be manifestly unfair for the Patent Office not to consider Applicant's arguments, which are necessitated due to the newly cited references, Fujisawa and Hashemi '477.

The Examiner has rejected claims 1-3 under 35 USC §102(e) as being anticipated by Fujisawa. For the reasons discussed below, Applicant respectfully submits that the present invention, as defined by independent claim 1, is patentably distinguishable over Fujisawa. However, Applicant reserves the right to provide declarations and/or documents under 37 CFR 1.131 to "swear behind" the effective filing date of Fujisawa.

Subject to Applicant's reserved right to establish priority of the present invention under 37 CFR 1.131, Applicant submits that the present invention, as defined by independent claim 1, teaches, among other things, a support pad situated underneath and coupled to a die by a down bonding wire. As disclosed in the present application, since the support pad is connected to a die ground bond pad by a substrate down bond area and a down bonding wire. As a result, the present invention advantageously achieves a minimal length electrical ground connection between the die ground pad and the support pad.

Moreover, as disclosed in the present application, the support pad is connected to a heat spreader by vias situated in the substrate. As a result, the present invention advantageously achieves a low resistance, low inductance, minimal length ground connection between the support pad and the heat spreader. Additionally, by situating the support pad underneath the die and thermally connecting the support pad to the heat spreader by vias, the present invention advantageously provides effective thermal conduction of excess heat away from the die.

In contrast to the present invention as defined by independent claim 1, Fujisawa does not teach, disclose, or suggest a support pad situated underneath and coupled to a die by a down bonding wire. Fujisawa specifically discloses electrode pads 4, which are arranged in the peripheral area of the main surface of base substrate 1 and are arranged along each side of semiconductor chip 10. See, for example, column 6, lines 36-40 and Figures 2, 3, and 4 of Fujisawa. In Fujisawa, each of electrode pads 4 are electrically

connected to each of several external terminals 11 arranged on main face 10A of semiconductor chip 10 through wires 13. See, for example, column 6, lines 40-43 and Figures 2, 3, and 4 of Fujisawa. However, as is clearly shown in Figure 4 of Fujisawa, electrode pads 4, which are electrically connected to external terminals 11 of semiconductor chip 10, are not situated underneath semiconductor chip 10. Although a group of electrode pads 4 in Fujisawa are situated underneath semiconductor chip 10, the group of electrode pads 4 which are situated underneath semiconductor chip 10 are not electrically connected to semiconductor chip 10 by a down bonding wire as required by independent claim 1. Thus, Fujisawa fails to teach, disclose, or suggest a support pad situated underneath and coupled to a die by a down bonding wire.

For all the foregoing reasons, Applicant respectfully submits that the present invention, as defined by independent claim 1, is not suggested, disclosed, or taught by Fujisawa. Thus, independent claim 1 is patentably distinguishable over Fujisawa and, as such, claims 2-3 depending from independent claim 1 are, *a fortiori*, also patentably distinguishable over Fujisawa for at least the reasons presented above and also for additional limitations contained in each dependent claim.

The Examiner has further rejected claims 1-27, 29, and 31-55 under 35 USC §102(e) as being anticipated by Hashemi '477. The present application is a continuation-in-part of, and claims priority from, pending application Serial No. 09/713,834, which was filed November 15, 2000. Pending application Serial No. 09/713,834 is in turn a continuation of Serial No. 09/252,851, filed February 17, 1999 and issued as patent


number 6,191,477. Thus, patent number 6,191,477, i.e. Hashemi '477 cited by the Examiner, is the "grand parent" of the present application.

For these reasons, Applicant respectfully submits that Hashemi '477 is disqualified as prior art under the provisions of 35 USC §102(e). Accordingly, Applicant respectfully submits that the rejection of claims 1-27, 29, and 31-55 under 35 USC §102(e) as being anticipated by Hashemi '477 has been overcome, and that, therefore, claims 1-27, 29, and 31-55 should now be allowed.

Based on the foregoing reasons, the present invention, as defined by independent claims 1, 17, and 44 and claims depending therefrom, is patentably distinguishable over the art cited by the Examiner. Thus, claims 1-27, 29, and 31-55 pending in the present application are patentably distinguishable over the art cited by the Examiner. As such, and for all the foregoing reasons, an early allowance of claims 1-27, 29, and 31-55 pending in the present application is respectfully requested.

Respectfully Submitted,
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